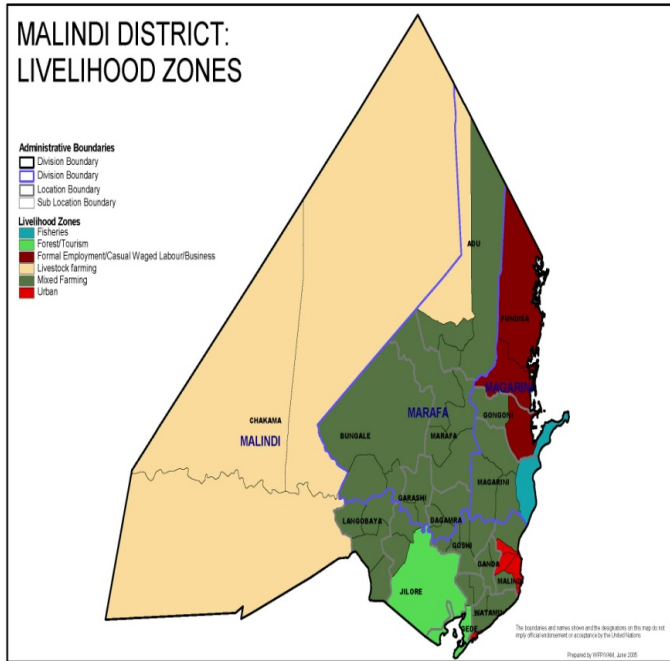




**OFFICE OF THE PRIME MINISTER
MINISTRY OF STATE FOR THE DEVELOPMENT OF NORTHERN KENYA AND OTHER ARID LANDS
ARID LANDS RESOURCE MANAGEMENT PROJECT II**

DROUGHT MONITORING BULLETIN, JUNE 2009

Malindi District Livelihood Zone Map

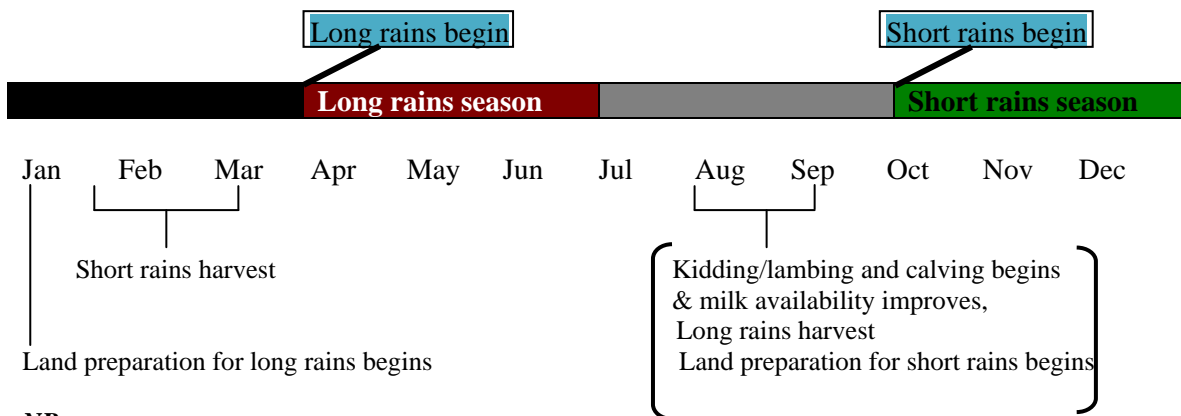


Warning Stages

Livelihood Zone	Stage	Trend
Mixed farming	Alarm	Worsening
Ranching/Livestock	Alarm	Improving
DISTRICT	Alarm	Worsening

* Livelihood zones monitored by EWS Data.

Seasonal Calendar



NB.

- Malindi district has a bimodal rainfall pattern
- Long rains fall between April and July while short rains fall between October and December

Situation overview

- The amount of rainfall received in the district during the month was only 75.3mm, with a temporal distribution of 10 days, up from 39.8mm received in the previous month (May 2009). The amount received was far below the long term mean of 328mm. Most of the rains were received along the coastal belt with the highest figure being recorded at Kakuyuni i.e. 155mm.
- The quality and quantity of pasture and natural vegetation continued to improve during the month owing to the continuation of the long rains in the mixed farming and livestock farming livelihood zones, albeit in varying amounts.
- The average distance to the nearest grazing fields reduced markedly during the month from 9.9 km in the previous month to 6.7km. The distance was, however, longer than the long term mean.
- The average distance from households/livestock concentration point to the nearest water source decreased from 5.3km in May to 3.9km in the month under review owing to the rains received during the month.
- The general performance of maize and other cereals along the coastal belt was impressive. Maize in particular was at tussling stage. However, the situation in the livestock farming zone and other hinterland areas of the district was still precarious.
- There was an army worm outbreak in Malindi and some parts of Magarini divisions during the first and second week of June. The caterpillars were, however, wiped out by the relatively heavy rains received along the coastal belt.
- The district average cattle price reduced from Ksh8,905 in May to Ksh 8,741 in the month under review. This was attributed to low supply of animals offered for sale by households, particularly in the livestock farming zone as a result of improved pastures and natural vegetation.
- Average maize price increased from Ksh35.50 in May to Ksh39.50. This was an indication that the scarcity of maize still prevailed in the district.
- Casual labour remained the major source of income for many households across all livelihood zones, followed by sale of charcoal. Charcoal burning and selling was more evident in the livestock farming zone while more households were involved in casual labour in the mixed farming zone, mostly in farms.
- The nutrition status of children below five years declined during the month under review, with the number of children rated at risk of malnutrition rising from 5.5% in May to 8.9%. The increase was attributed to a worsening food security situation in the livestock farming zone (Langobaya division) and some parts of the mixed farming zone (Marafa division).
- The district coping strategy index (CSI) during the month was 2.5, down from 2.6 in May 2009. Despite the drop, the level of household food insecurity remained high during the month as households employed different coping strategies.

Recommendations to DSG and KFSM

- Continued EMOP GOK/WFP relief food operations. Food for work aid distribution to target more beneficiaries.
- Supply of relief food to non-EMOP locations i.e. Goshi, Gede, Magarini.
- Supplementary and therapeutic feeding for under fives, lactating and pregnant mothers and the elderly in flagged locations.
- Encourage farmers to plant drought-tolerant crops in the next season.

Food aid

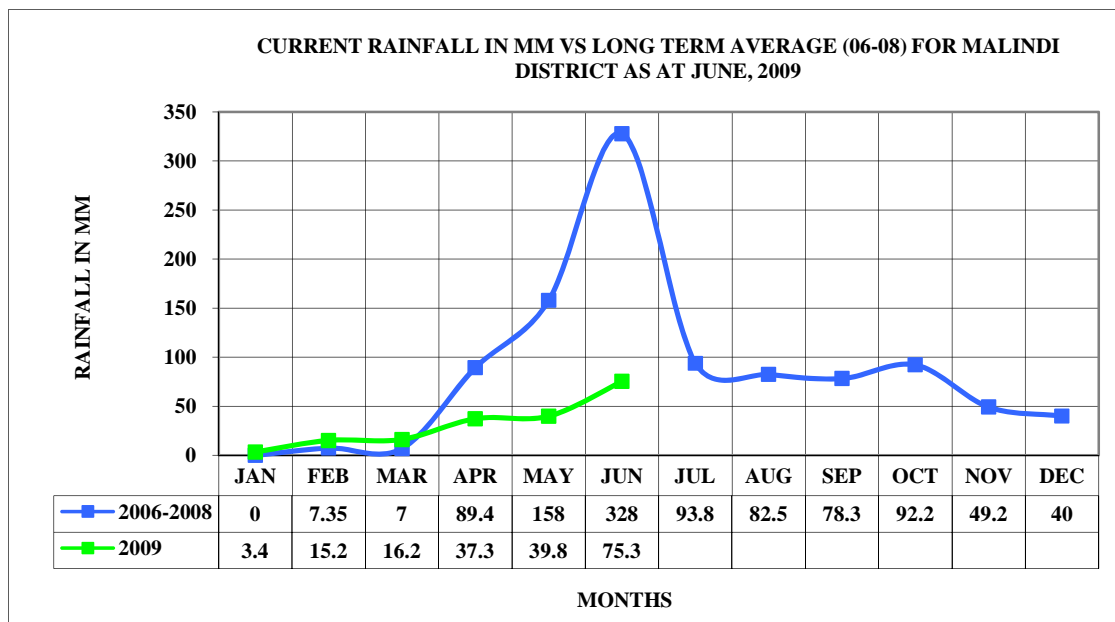
- School-feeding programme targeting 94 primary schools i.e. 41 on regular and 53 on extended programme.

Non-food interventions

Excavation of Bofu kwa Binzaro community dam in Chakama location under Kazi kwa Vijana programme.

1.0 Environmental indicators (Stability)

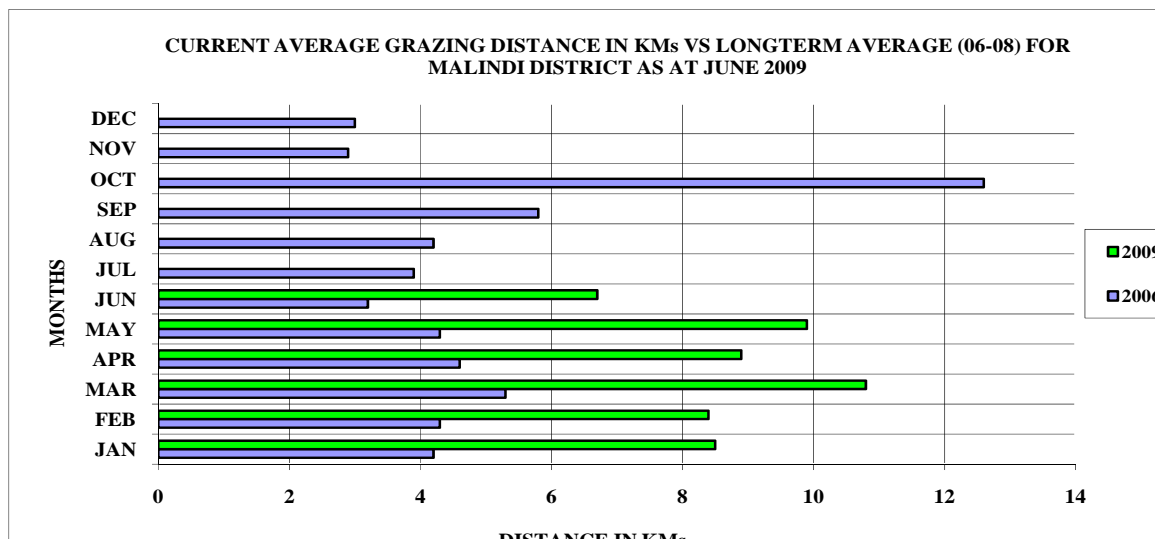
1.1 Rainfall



Source: ALRMP sample sites. Total sample size (n) – 12 sites

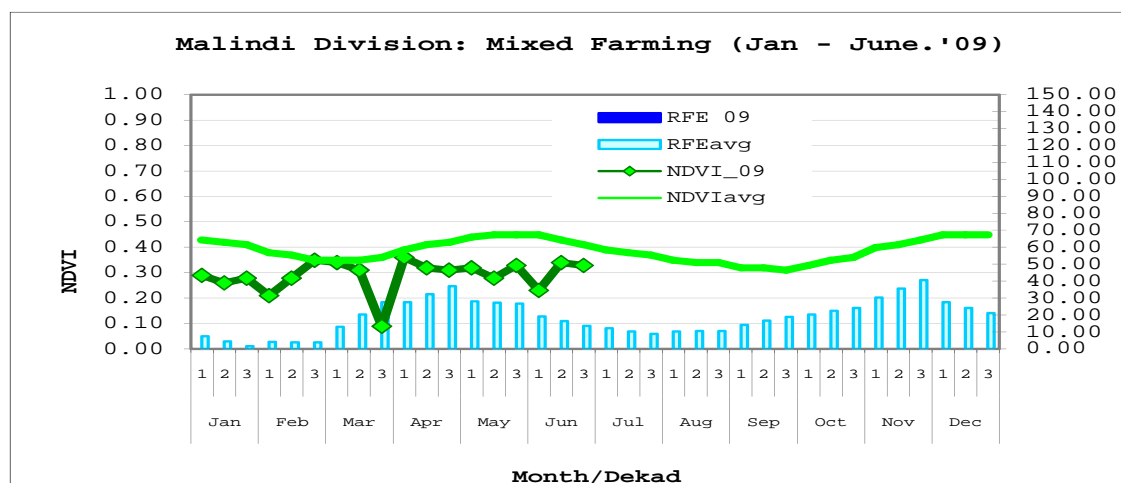
- The amount of rainfall received in the district during the month was only 75.3mm, with a temporal distribution of 10 days, up from 39.8mm received in the previous month (May 2009). This represents an 89.1% increase in the amount of rainfall compared to the previous month.
- However, the amount received was far below the long term mean of 328mm. Most of the rains were received along the coastal belt with the highest figure being recorded at Kakuyuni with 155mm.
- Overall, the district received only 23% of the average rainfall received during this time of the year.
- The livestock farming zone recorded the lowest amounts of rainfall during the month i.e. Kisiki cha Wagiriana – 5mm.

1.2 Condition of natural vegetation and pasture

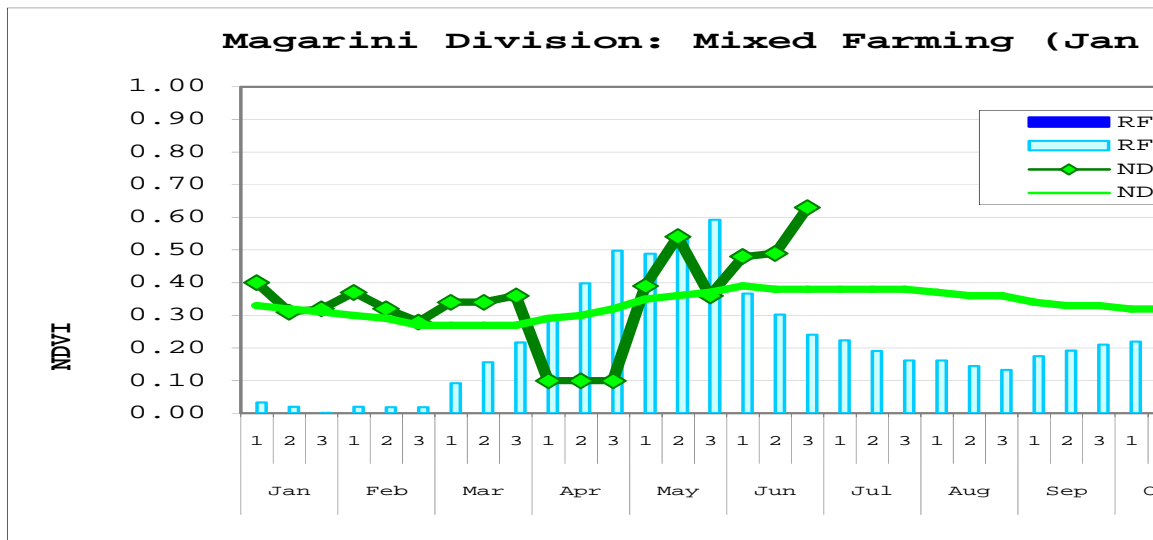


Source: ALRMP sample sites. Total sample size (n) 240 households

- The quality and quantity of pasture and natural vegetation continued to improve during the month owing to the continuation of the long rains in the mixed farming and livestock farming livelihood zones, albeit in varying amounts.
- As a result, the average distance to the nearest grazing fields reduced markedly during the month from 9.9 km in the previous month to 6.7km.
- The distance was, however, longer than the long term mean.

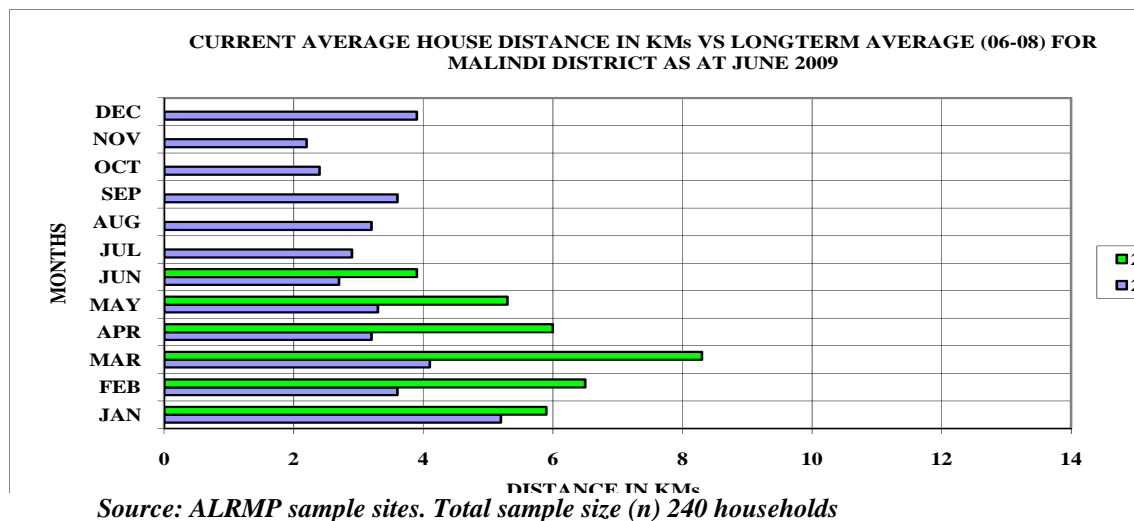


- The quantity of pasture and browse in Malindi division in the mixed farming and livestock farming livelihood zone improved significantly in the first dekad of the month as shown above. This is because most parts of the zone, particularly in Langobaya and Chakama locations, received some rains which enabled the rejuvenation of natural vegetation. However, the overall pasture condition was below the average.



- The mixed farming areas of Magarini division along the coastal belt received most of the rains in the district during the month under review. Consequently, the pasture condition in this division improved tremendously as indicated in the above graph.

1.3 Distance to water sources



- River Sabaki, boreholes, shallow wells and the main Baricho – Malindi pipeline continued to be the main water sources during the month.
- Despite the rains received during the month, most community earth dams and pans in the mixed farming and livestock farming livelihood zones did not recharge with adequate amounts of water i.e. Magarini, Chakama, Bungale and Adu locations.
- However, the average distance from households/livestock concentration point to the nearest water source decreased from 5.3km in May 2009 to 3.9km in the month under review.
- Distances were shorter in the mixed farming zone than in the livestock farming zone, owing to comparatively better amounts of rainfall received in the former zone.
- The above scenario was not normal at the time of the year since the distance was still longer than the long term mean.

1.4 Emerging issues

- Poor rains in the livestock farming zone and some parts of the mixed farming zone. Maize and other cereals performed poorly in areas of Langobaya, Chakama and Bungale locations.

- Wildlife menace in Chakama locations. Elephants destroyed maize and banana crops in Kisiki sub-location.
- Shortages of water in Bungale, Soso-chamari areas of Marafa division and Bofu in Langobaya division.

1.5 Implications on food security

- The general performance of maize and other cereals along the coastal belt was very impressive. Maize in particular was at tussling stage. The condition was a pointer to a better maize harvest along the belt, hence a massive improvement in food security. However, the situation in the livestock farming zone and other hinterland areas of the district is still precarious.
- Availability of pasture and natural vegetation during the month impacted positively on animal body condition and milk production, thus improved food security in livestock keeping households.

2.0 Rural economy indicators (Food availability)

2.1 Livestock production

2.1.1 Livestock body condition

- The general body condition of all livestock types was good in both livelihood zones i.e. livestock and mixed farming. Animals were able to access pasture and water in varied distances throughout the district.
- The observed livestock condition was normal during the time of the year.

2.1.2 Livestock diseases

- Tick and tsetse infestation among cattle was noted in Kisiki sublocation of Chakama location. The local veterinary office was informed about the incident.

2.1.3.1 Milk production

- There was a significant improvement in the amount of milk produced by households during the month, from a daily average of 63.5 bottles of 750ml capacity in the previous month (May) to 71 bottles in the month under review, thereby representing an 11.8% increase.
- The improvement was attributed to improved animal body condition owing to improved pastures and natural vegetation in both livelihood zones.
- As in the previous month, more milk was produced in the livestock farming zone than in the mixed farming zone i.e. 95 bottles and 46 bottles respectively.

2.2 Crop production

2.2.1 Timeliness and status of crop production

- The following were the main field activities during the month;
 - Weeding in annual crops, especially maize in parts of Malindi and Magarini divisions (along the coastal belt). The maize crop in this region is at tussling stage. In Langobaya and parts of Marafa divisions maize was still at knee high stage and exhibiting water stress.
 - Transplanting of vegetables in both irrigated and rain-fed areas along the coastal belt.
 - Harvesting and marketing of green leafy vegetables along riverine areas, mangoes and coconuts.
 - Pest and disease control in irrigated crops in vegetables and perennial crops.
 - Nursery management for vegetables.
- Mango trees in the mixed farming zone were at fruiting stage.

2.2.2 Pests and diseases

- There was an army worm outbreak in Malindi and some parts of Magarini divisions during the first and second week of June. The caterpillars were mainly found in pastures and grasses within Ganda and Watamu locations. However, these were wiped out by the relatively heavy rains received along the coastal belt.
- The department of Agriculture received adequate equipment and chemicals in preparation for any future outbreak of any pests and diseases.

2.2.3 Harvest

- Harvesting and selling of cassava and green leafy vegetables was ongoing in the mixed farming zone. Vegetables sold during the month were mainly grown under irrigation along the Sabaki river basin.
- Off-season mangoes were also harvested and sold in Malindi town.

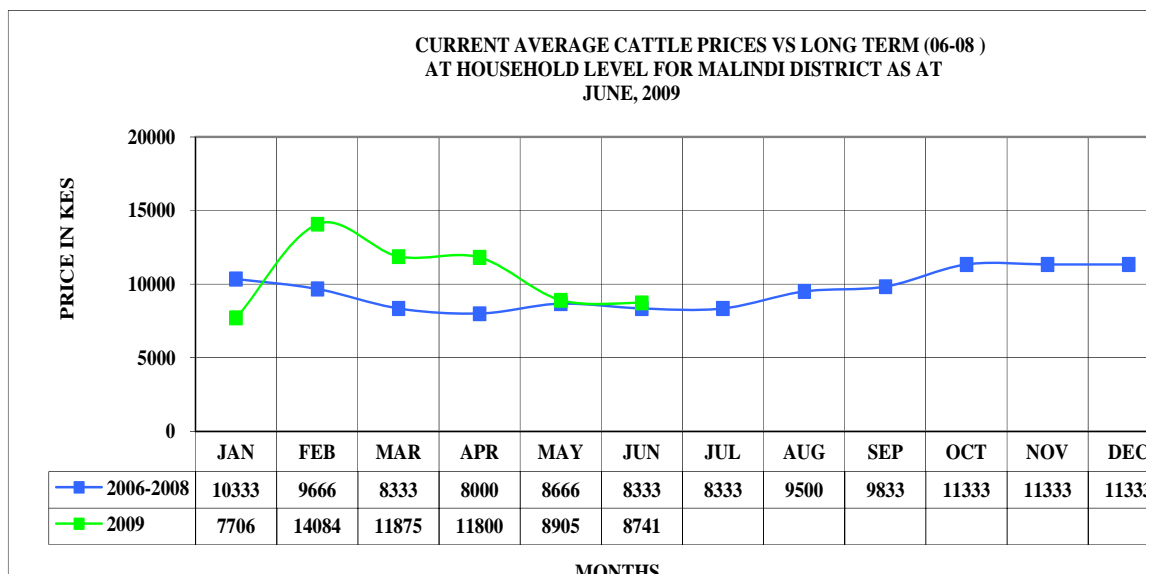
2.2.4 Implications on food security

- Good livestock body condition and a corresponding significant increase in milk production in both livelihood zones impacted positively on household food security as more milk was available for domestic consumption and also for sale. However, only about 30% of sampled households had milking cows during the month.
- Since maize and other cereal crops were at different stages of development, it was noted that the food security status of most households in both livelihood zones was still poor.

3.0 Access to food

3.1 Livestock marketing

3.1.1 Cattle prices

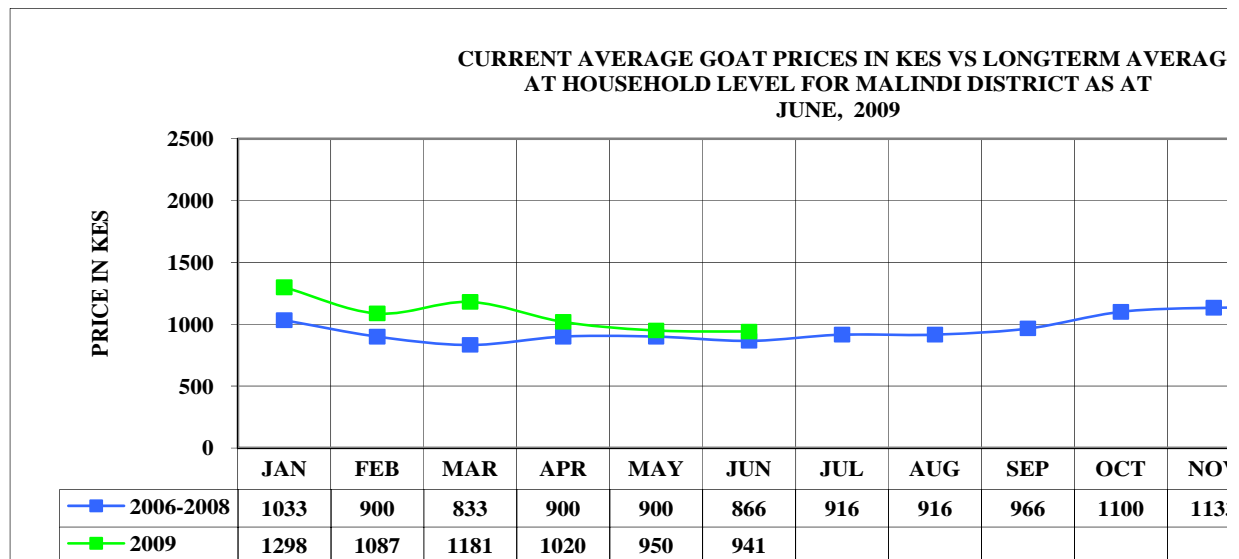


Source: ALRMP sample sites. Total sample size (n) 240 households

- There was a reduction in the average price of cattle during the month. The average price reduced from Ksh8,905 in May to Ksh8,741 in the month under review, thereby representing a 1.8% decrease. The average price was 4.9% above the long term average.
- The drop in the average price could be attributed to low supply of animals offered for sale by households particularly in the livestock farming zone as a result of improved pastures and natural vegetation.
- Livestock keepers are now holding onto their animals in anticipation of better prices.
- There were salient inter and intra livelihood price differences with the average price being Ksh9,708 and Ksh7,773 in the livestock farming zone and mixed farming zone respectively.

- Compared to the long term mean, the decrease in price was normal.

3.1.2 Goat prices



Source: ALRMP sample sites. Total sample size (n) 240 households

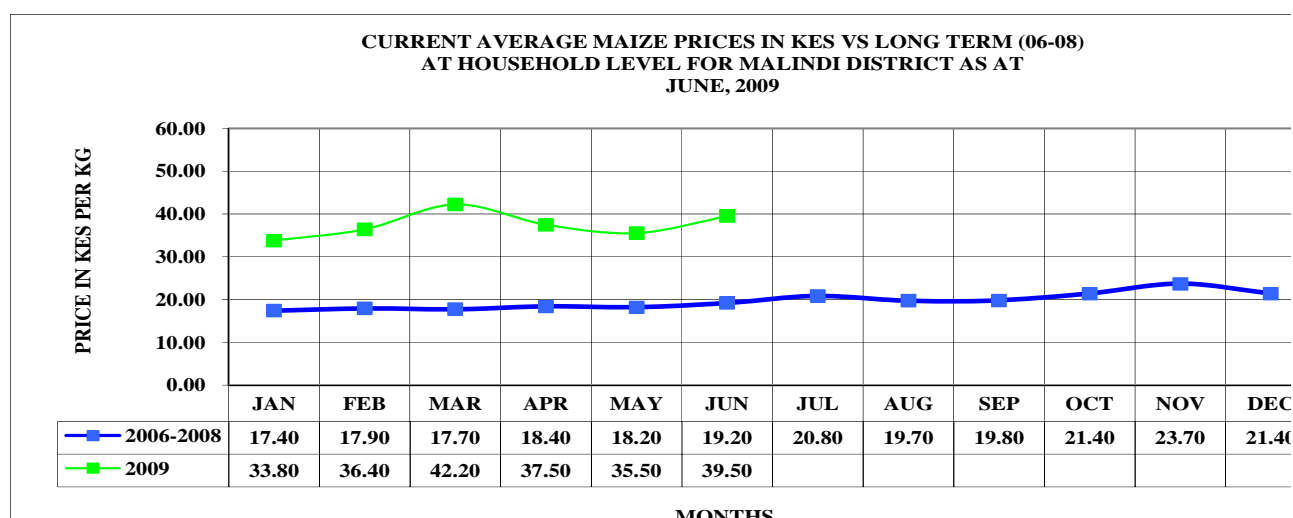
- The district average goat price reduced marginally from Ksh 950 in May to Ksh 941 in the month under review. This represents a 0.9% decline in the average price for the month.
- The slight price decrease could be attributed to a drop in supply of goats offered for sale in the local markets by households due to the improved pasture conditions.
- As in the previous month, goat prices, which were lower than the long term mean, remained higher in the mixed farming zone at Ksh 939 compared to Ksh 943 in the livestock farming zone. The price was within the acceptable seasonal ranges.

3.2 Milk consumption

- Consumption of milk by households decreased during the month across the district, from a daily average of 57 bottles in the previous month (May) to 53.5 bottles in June 2009.
- More milk was sold during the month compared to the previous month.

3.3 Crop prices

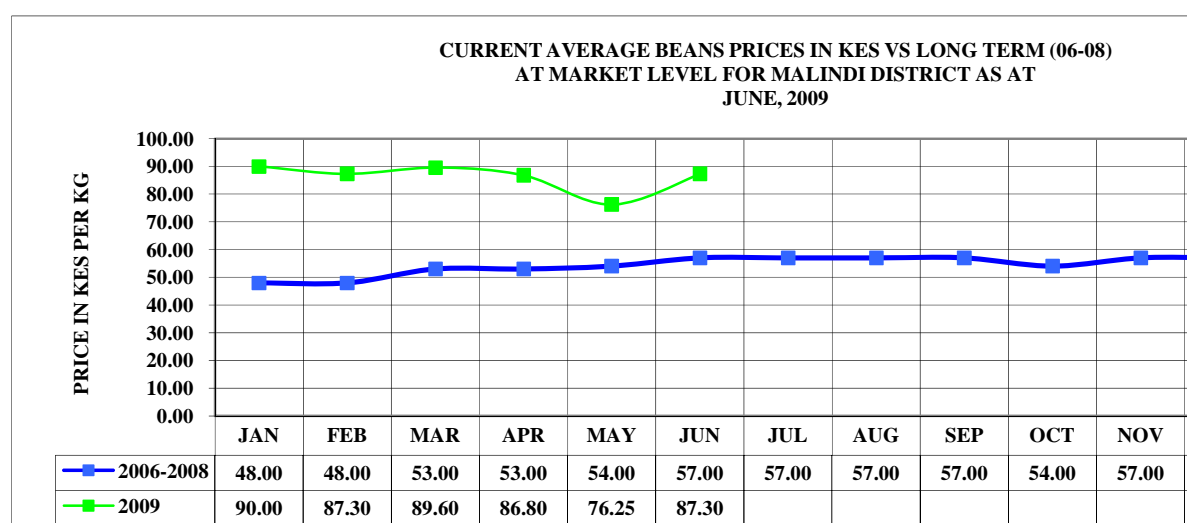
3.3.1 Maize prices



MONTHS
Source: ALRMP sample sites. Total sample size (n) 240 households

- The district average maize price increased from Ksh 35.50 in May 2009 to KES 39.50 in June 2009 as shown in the above graph. This represents an 11.3% rise.
- The price was, however, 105.7% higher than the long term average. This shows that the scarcity of maize still persists in the district. Very few households sold maize during the month in the mixed farming zone, mostly to neighbors. No maize was sold in the livestock farming zone.
- At the market level, most local markets in sample areas did not have maize stocks.

3.3.2 Beans prices

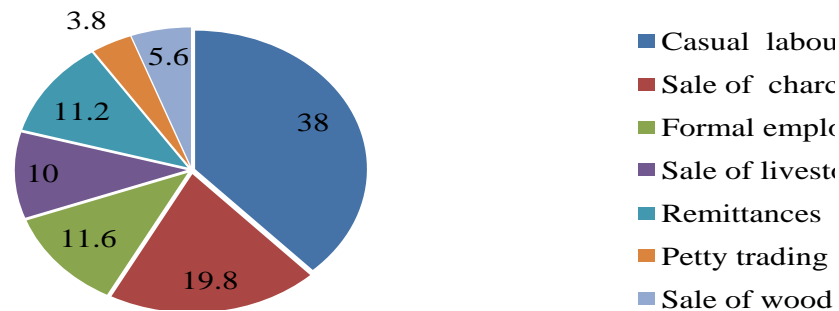


Source: Retail markets in 8 EWS sample areas

- There was a significant increase in the district average price of beans during the month under review from an average of Ksh76.25 in May to Ksh87.30.
- This was attributed to low supplies in local markets during the month compared to the previous month.
- The district does not produce adequate amounts of beans and therefore depends on external sources for its requirements.
- It is worth noting that the above price was above the long term mean by 53.2%.

3.4 Income

**Sources of income at household level as a percentage
Malindi District June 2009**



Source: ALRMP sample sites. Total sample size (n) 240 households

3.4.1 Income

- As in the previous month, casual labour remained the major source of income for many households across all livelihood zones, followed by sale of charcoal. The number of households engaged in casual labour increased significantly from 34.5% in May 2009 to 38% in June 2009.
- This was attributed to the need for households to gain cash to meet food and non-food household expenditure.
- There was a drop in the number of households who traded in charcoal from 21.4% in May 2009 to 19.8% in June 2009 as a result of the continuing long rains. It is difficult to burn charcoal during the rains. Moreover, households concentrate on farming activities during this period.
- Charcoal burning and selling was more evident in the livestock farming zone while more households were involved in casual labour in the mixed farming zone, mostly in farms.
- As in the previous month, sale of livestock was recorded in households in the livestock farming zone only.

3.4.2 Livestock income

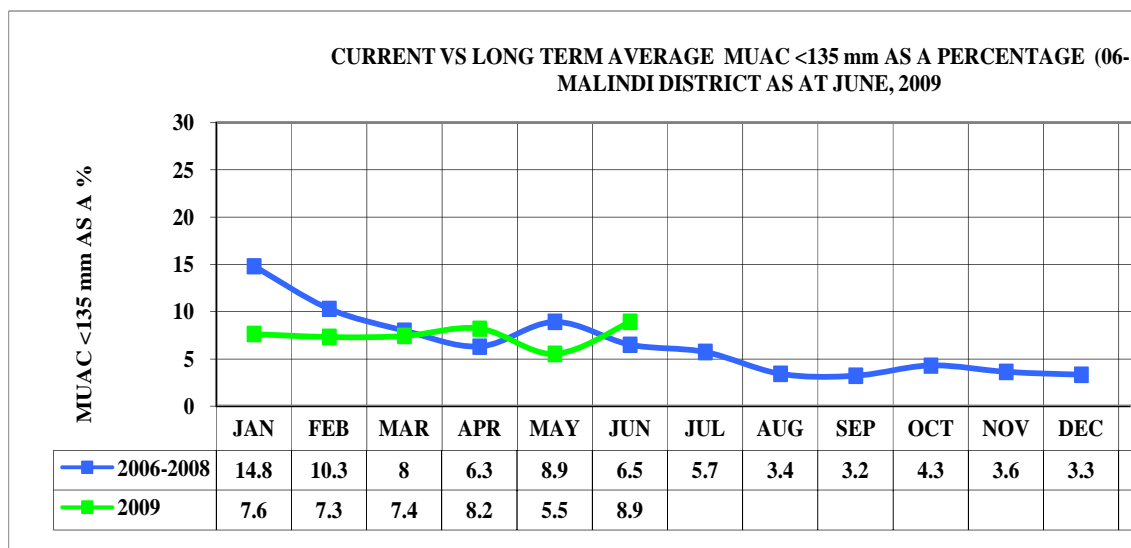
- There was no change in the number of sampled households who traded in livestock during the month compared to the previous month of May 2009. Only 10% of the sampled households obtained income from the sale of livestock.
- However, on average, sampled households sold 30 heads of cattle, 93 goats and 121 poultry in June compared to 31 heads of cattle, 102 goats and 53 poultry in May 2009.
- Most of the animals were sold in the livestock farming zone.

3.5 Implication on food security

- Falling livestock prices, low milk consumption and reduced incomes from the sale of animals impacted negatively on food security in the livestock farming zone in Langobaya division and parts of Marafa division.
- High maize and bean prices have also aggravated the situation as most households have less disposable incomes to purchase food.

4.0 Human welfare indicators (Utilisation of food)

4.1 Nutritional status



Source: ALRMP sample sites. Total sample size (n) 240 households

- The nutrition status of children below five years declined during the month under review.
- The number of children rated at risk of malnutrition rising from 5.5% in May to 8.9%.
- The increase was attributed to a worsening food security situation in the livestock farming zone (Langobaya division) and some parts of the mixed farming zone (Marafa division).
- Higher rates were recorded in the livestock farming zone at 15.4% compared to 2.4% in the mixed farming zone.
- Shortages of water in some areas also hampered the preparation of meals in schools thereby further affecting the health status of children.

4.2 Human Health

- A cholera outbreak was reported in the district on 10th June 2009 in the following areas; Garashi and Marafa location in Marafa division and Kakuyuni sub location and Malindi location in Malindi division. The District Medical Officer of Health and public Health Officer contained the situation.

4.3 Flagged areas

- Livestock farming zone i.e. Chakama location.
- Mixed farming zone i.e. Adu, Bungale, Fundissa, Gongoni and Langobaya locations.

5.0 Current interventions

5.1 Non-food interventions

Type of Intervention	Donor/Implementing Agency
Excavation of Bofu kwa Binzaro community dam in Chakama location under Kazi kwa Vijana programme	Ministry of Water & Irrigation
Implementation of Jilore 'B' community irrigation scheme	ALRMP, Water & Irrigation Dept

5.2 Food aid

Type of Intervention	Donor/Implementing Agency
Supplementary feeding programme (SFP) in 11 health facilities, targeting approximately 2892 beneficiaries	ALRMP/MoH

5.3 Coping strategies

- Reduction in number of meals per day
- Purchase of food on credit
- Reducing size of meals
- Restricted consumption of food by adults to allow more for children
- Going for an entire day without a meal.
- The district coping strategy index (CSI) during the month was 2.5, down from 2.6 in May 2009. Despite the drop, the level of household food insecurity remained high during the month as households employed different coping strategies as indicated above.
- As in the previous month, Kamale, Kisiki cha Wagiriama and Makongeni data collection sites/sub location showed abnormal trends (above 4) against a coping strategy index (0-10) indicating the devastating impact of the current food security situation at the household level.

6.0 Recommendations to DSG and KFSM

Food aid

Type of Recommendation	Action
Continued EMOP GOK/WFP relief food operations. Food for work aid distribution to target more beneficiaries	GoK/WFP
Supply of relief food to non Emop locations i.e. Goshi, Gede, Magarini	GoK
Supplementary and therapeutic feeding for under fives, lactating and pregnant mothers and the elderly in flagged locations.	ALRMP, MoH

Non-food interventions

Type of Recommendation	Sector
Promotion of irrigation agriculture in the district along river Sabaki	Water & Irrigation
Rehabilitation of strategic water sources, (boreholes, pipelines and shallow wells).	Water
Encourage farmers to plant drought tolerant crops in the next season	